



October 8, 2009

City of Chicago  
Richard M. Daley, Mayor

Department of Innovation and  
Technology

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**VIA ELECTRONIC FILING**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street, SW, Suite TW-A325  
Washington, D.C. 20554

Re: **ERRATUM** - City of Chicago comments on defining  
"broadband" in:

GN Docket No. 09-47; International Comparison and  
Consumer Survey Requirements in the Broadband Data  
Improvement Act

GN Docket No. 09-51; In the Matter of National  
Broadband Plan For Our Future

GN Docket No. 09-137; Inquiry Concerning the  
Deployment of Advanced Telecommunications Capability  
to All Americans in a Reasonable and Timely Fashion, and  
Possible Steps to Accelerate Such Deployment Pursuant to  
Section 706 of the Telecommunications Act of 1996, as  
Amended by the Broadband Data Improvement Act

Dear Ms. Dortch:

The City of Chicago previously filed timely comments regarding the  
definition of "broadband" in the above-referenced dockets. That filing  
contained a formatting error. Today, the City of Chicago resubmits those  
same comments, making no substantive changes to the timely filing, but  
correcting the formatting error for the record.

Respectfully submitted,

\_\_\_\_\_/s/  
Hardik V. Bhatt  
Chief Information Officer  
City of Chicago

Enclosure(s)



**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC**

In the Matters of	)	
	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
	)	
International Comparison and Consumer	)	GN Docket No. 09-47
Survey Requirements in the Broadband	)	
Data Improvement Act	)	
	)	
Inquiry Concerning the Deployment of	)	GN Docket No. 09-137
Advanced Telecommunications Capability	)	
to All Americans in a Reasonable and	)	
Timely Fashion, and Possible Steps to	)	
Accelerate Such Deployment Pursuant to	)	
Section 706 of the Telecommunications	)	
Act of 1996, as Amended by the	)	
Broadband Data Improvement Act	)	

**COMMENTS OF THE CITY OF CHICAGO – NBP Public Notice #1**

In calling for a National Broadband Plan (“Plan”), Congress shares the spirit of Daniel Burnham, the visionary American architect and urban planner. The essence of this spirit is summarized in Burnham’s famed quote: “Make no little plans. They have no magic to stir men's blood and probably will not themselves be realized. Make big plans.” The Federal Communications Commission (“Commission”) should seize its opportunity to fulfill this spirit – by defining “broadband” in a forward-looking and visionary manner.

The City of Chicago (“City”) submits these comments as an affected local unit of government. The Plan’s impact upon cities like Chicago and other metropolitan areas is fundamentally linked to the intent of the Plan: that broadband should advance national purposes.<sup>1</sup> The purposes of metropolitan areas are reflections of national purposes.

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<sup>1</sup> See American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 6001(k)(2)(D) (Feb. 17, 2009) (“Recovery Act”).

Metropolitan areas hold 84% of the nation's population<sup>2</sup>, 85% of the nation's jobs<sup>3</sup> and account for 75% of economic activity.<sup>4</sup> They are key hubs for entrepreneurship and innovation, with 90% of utility patents in the last two decades being granted to residents of metropolitan areas.<sup>5</sup> New opportunities for worldwide communication have only further strengthened the critical role of cities and metropolitan areas in our national economy.

## **I. The Definition of “Broadband” Should be Robust and Forward-Looking.**

The definition of “broadband” (“Definition”) can be a tool for encouraging the cycle of innovation. Technologists develop broadband applications once consumers have access to required bandwidth. Consumers, on the other hand, upgrade their Internet access once they can identify broadband applications that meaningfully impact their lives. The Commission should adopt a Definition that promotes advanced infrastructure and applications.

### **A. The Commission’s Definition Should Include Both Application-Based and Provider-Oriented Components.**

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<sup>2</sup> U.S. Census Bureau News, *Press Release*, (March 19, 2009) available at: <http://www.census.gov/Press-Release/www/releases/archives/population/013426.html> (last visited September 8, 2009).

<sup>3</sup> Brookings Institution, “*About the Metropolitan Policy Program*,” available at: <http://www.brookings.edu/metro/About-Us.aspx> (last visited September 8, 2009).

<sup>4</sup> Alan Berube, Brookings Institution, “*ARRA and Metropolitan Policy: A Preliminary Assessment*,” (May 2009) available at: [http://www.brookings.edu/speeches/2009/~//media/Files/rc/speeches/2009/0513\\_arra\\_berube/0513\\_arra\\_berube\\_ppt.pdf](http://www.brookings.edu/speeches/2009/~//media/Files/rc/speeches/2009/0513_arra_berube/0513_arra_berube_ppt.pdf) (last visited September 8, 2009).

<sup>5</sup> Ruben Hernandez-Murillo, Federal Reserve Bank of St. Louis, “*Cities as Centers of Innovation*,” (March 2003) available at: [http://research.stlouisfed.org/publications/net/20030301/net\\_20030327.pdf](http://research.stlouisfed.org/publications/net/20030301/net_20030327.pdf) (last visited September 8, 2009).

The Definition should consist of two required components: (a) an application-based (i.e. end-user) component and (b) a throughput-based (i.e., provider) component. Broadband access speeds and end-uses are each dependent upon the other. Accordingly, the Definition should contemplate both.

The application-based component should focus on the online activities of end-users in the near future. An application-based component should also recognize that the expected activities of end-users will include potentially transformative applications, such as telemedicine, real-time energy monitoring or distance learning. An added benefit of an application-based component is that it implicitly accounts for other factors that may influence the quality of experience, such as latency, jitter and reliability.

Congress has recognized the importance of broadband end-uses. First, it requested that the Plan not simply consider broadband in a vacuum, but how broadband will advance national purposes.<sup>6</sup> Second, Congress similarly incorporated an application-based component into an existing definition in the Telecommunications Act of 1996:

The term ‘advanced telecommunications capability’ is defined, without regard to any transmission media or technology, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology.<sup>7</sup>

The throughput-based (i.e., provider) component should specify minimum download and upload speeds that are generally sufficient to support near-term applications and enable future growth. This component could enable the uniform

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<sup>6</sup> Recovery Act § 6001(k)(2)(D)

<sup>7</sup> Telecommunications Act of 1996, Pub. L. No. 104-104, § 706(c) (Feb. 8, 1996) (“Telecom Act”) (emphasis added).

standards for applications like smart grid and electronic health records that have yet to emerge.

**B. The Commission Should Adopt One Definition.**

The Commission should adopt one definition of “broadband,” without regard to differing technologies. While different technologies offer tradeoffs between factors such as speed and mobility, *all* broadband access must support key applications. For example, it is possible that a consumer may use a mobile device to access the Internet, but there may be insufficient bandwidth to allow for distance learning. This is certainly Internet access, but it is not a broadband experience capable of advancing regional and national priorities.

Congress mandated that the Plan concern a broadband strategy and not, for example, a mobile Internet access strategy. Were the Commission considering a mobile Internet access strategy, it certainly would not consider a different definition of “mobility” for fixed access technologies. Instead, this Plan concerns broadband, and accordingly, the Definition should be consistent across all technologies.

**II. The Commission Should Adopt a Minimum Threshold that Seeks to Improve the Current State of Broadband in the United States.**

The Commission should adopt high-speed, forward-looking, minimum thresholds for “broadband.” Congress indeed intended that the Plan would be forward-looking, and not merely an endorsement of the status quo. Specifically, Congress requested that the

Plan attempt “maximum utilization of broadband infrastructure”<sup>8</sup> for “advancing [...] national purposes.”<sup>9</sup>

When considering application-based (i.e., end-user) requirements, the Commission should consult experts in the public and private sectors relating to national priority areas, such as health care delivery, energy and education. The Commission’s recent workshops are an excellent first step. By creating subject-specific advisory committees, the Commission could further tap the knowledge held by public and private experts. Such committees could catalogue emerging broadband applications and their bandwidth needs, thereby advising the Commission as it updates the definition of broadband over time.

When considering throughput-based (i.e., provider) requirements, the Commission should set minimum thresholds that are globally competitive. According to the Organization for Economic Co-Operation and Development, the United States currently ranks 19<sup>th</sup> in average advertised Internet download speeds.<sup>10</sup> The Commission should adopt a definition of “broadband” that aspires to return the United States to the world leader in broadband.

As other commenters have noted, satellite Internet access is ubiquitous in the United States.<sup>11</sup> Further, satellite Internet access routinely delivers download speeds of

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<sup>8</sup> Recovery Act § 6001(k)(2)(B) (emphasis added).

<sup>9</sup> See Recovery Act § 6001(k)(2)(D) (emphasis added).

<sup>10</sup> See Organization for Economic Cooperation and Development, Broadband Portal, “Average advertised broadband download speed, by country,” (Sept. 2008) available at: <http://www.oecd.org/sti/ict/broadband> (last visited September 8, 2009).

<sup>11</sup> See e.g., “JOINT COMMENTS OF HUGHES NETWORK SYSTEMS, LLC AND WILDBLUE COMMUNICATIONS, INC. – NBP PUBLIC NOTICE #1” (Aug. 2009) available at: [http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=7020037128](http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=7020037128) (last visited September 8, 2009).

768kbps and upload speeds of 200 kbps.<sup>12</sup> Accordingly, were the Commission to find that “broadband” is merely 768kbps/200kbps, it would sanction the current state of broadband in the United States. Instead, the Commission should “make big plans” and adopt a visionary, minimum threshold of broadband at 45 Mbps/15Mbps.

### **Conclusion**

Cities like Chicago need a high-speed, forward-looking definition of “broadband.” When American cities seek to attract business, labor or investment, they are measured against other cities across the globe. An aggressive, aspirational definition of “broadband” will increase the competitiveness of American cities.

Respectfully submitted,

\_\_\_\_\_/s/\_\_\_\_\_  
Hardik V. Bhatt  
Chief Information Officer  
City of Chicago

September 8, 2009

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<sup>12</sup> Id.